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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,203	09/10/2003	Joy Sawyer Bloom	AD6930 US NA	5565
23906 7590 09/12/2007 E I DU PONT DE NEMOURS AND COMPANY LEGAL PATENT RECORDS CENTER BARLEY MILL PLAZA 25/1128 4417 LANCASTER PIKE WILMINGTON, DE 19805			EXAMINER WOODWARD, ANA LUCRECIA	
			ART UNIT 1711	PAPER NUMBER
			NOTIFICATION DATE 09/12/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-Legal.PRC@usa.dupont.com

Office Action Summary

Application No.

10/659,203

Applicant(s)

BLOOM, JOY SAWYER

Examiner

Ana L. Woodward

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on August 15, 2007
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) 2-5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 6-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

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DETAILED ACTION

Election/Restrictions

1. Claims 2-5 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected group, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on February 15, 2005.

Claim Rejections - 35 USC § 112

2. Claims 1 and 6-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, "grafted polyphenylene ether resin" is indefinite as to scope and meaning. This is because the nature of the grafted entity is not apparent.

In claim 1, line 7, the term "containing" conflicts with the antecedently recited narrower language "consisting essentially of".

In claim 6, there is no express antecedent basis for the PEKK species.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 and 6-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 5,789,523 (George et al) as per reasons of record.

George et al disclose a polyimide composition with improved wear resistance and reduced coefficient of friction. The composition comprises from 70-99.9 weight percent of at least one polyimide and from 0.1-30 weight percent of at least one sheet silicate, such as mica, reading on the corresponding component presently claimed. The composition can also contain a blend of the polyimide with from about 45 to 79.9 weight percent of at least one other polymer which is melt processable selected from polyamide and polyester resin inclusive of LCPs, reading on the polyamide, PET and LCPs presently claimed. Furthermore, the composition includes up to 60 weight percent other additives, fillers and dry lubricants. In particular, the incorporation of graphite, reading on the corresponding component presently claimed, into the composition can extend the range of its utility as a wear resistant material. Another beneficial additive is carbon fiber, reading on the corresponding component presently claimed, for the purpose of reducing coefficient of thermal expansion (column 3, line 66-column 4, line 8). Example 29 discloses a composition comprising polyimide obtained from pyromellitic anhydride and oxydianiline, 5 weight percent mica, 57 weight percent graphite and 5 weight percent carbon fiber governed by a coefficient of friction range of 0.06-0.13.

In essence, the example of George et al differs from the present claims in not expressly exemplifying a melt processable resin and in the high content of graphite used. With regard to the first difference, it is within the general disclosure of the reference to blend the polyimide resin with at least one melt processable polyester or polyamide, inclusive of LCPs. Accordingly, the further use of said melt processable resin for its expected additive effect would have been obvious to one having ordinary skill in the art. As to the graphite content, it is maintained that it would have been obvious to one having ordinary skill in the art to have employed the graphite in

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lower contents falling within the scope of the present claims because the additive can be used in an amount of up to about 60 weight percent based upon the total weight of the composition. In this regard, notice is made of the lower graphite contents used in examples 21 and 22.

Accordingly, absent evidence of unusual or unexpected results, no criticality can be seen in applicants' claimed graphite content.

As to present claims 7 and 8, while George et al do not expressly disclose the length of the carbon fibers, it is maintained that by being silent relative to the size of the carbon fiber, patentees' general disclosure implicitly suggests that any conventional size of carbon fiber can be suitably used with the reasonable expectation of success. In this regard, attention is directed to the similar-such disclosure of Lem et al, which teaches that chopped carbon fibers usually have fiber lengths of greater than 0.01 cm (equivalent to about 0.004 inches or 0.1 mm).

It is not seen that the presently claimed "consisting essentially of" language would preclude the polyimide component of the reference particularly since polyimide components can additionally incorporated into applicants' own base composition (per withdrawn claim 2). The onus is shifted to applicants to establish that the incorporation of the polyimide component would materially affect the basic and novel characteristics of the presently claimed composition.

5. Claims 1 and 6-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. 5,844,036 (Hughes) as per reasons of record.

The rejection is maintained with the premise that presently claimed thermoplastic material includes polyetherketone ketone (PEKK), reading on the reference's polyaryletherketone, as evidenced by its recitation in claim 6.

Response to Arguments

6. Applicant's arguments filed August 15, 2007 have been fully considered but they are not persuasive.

It is not seen that the presently claimed "consisting essentially of" language would preclude the polyimide component of George et al particularly since polyimide components can additionally incorporated into applicants' own base composition (per withdrawn claim 2). The onus is shifted to applicants to establish that the incorporation of the polyimide component would materially affect the basic and novel characteristics of the presently claimed composition.

The rejection is maintained with the premise that presently claimed thermoplastic material includes polyetherketone ketone (PEKK), reading on the reference's polyaryletherketone, as evidenced by its recitation in claim 6.

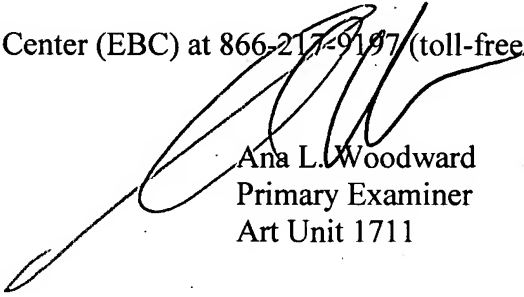
Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ana L. Woodward whose telephone number is (571) 272-1082. The examiner can normally be reached on Monday-Friday (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James J. Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ana L. Woodward
Primary Examiner
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